

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-54

NPDES NO. CA0006751

WASTE DISCHARGE REQUIREMENTS FOR:

ALAMEDA COUNTY WATER DISTRICT,
BERNARDO SOFTENING PLANT,
FREMONT, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Alameda County Water District (hereinafter called the discharger), 38050 Fremont Boulevard, Fremont, submitted a National Pollutant Discharge Elimination System (NPDES) Application for a Permit to Discharge - Short Form C for renewal of its expiring permit to discharge wastewater from its M. J. Bernardo Water Softening Plant.
2. The discharger currently discharges approximately 0.1 MGD of spent brine softening regeneration wastewater from its plant at the corner of Peralta Boulevard and Mowry Avenue in Fremont. The discharge is at a rate of about 1,000 gallons per minute and under average day conditions, there are four 24-minute periods of discharge per day. The discharge is through a pipeline which runs along Mowry Avenue and then empties at either of two locations into Alameda County Flood Control District's open channels which flow to Mowry Slough at the westerly end of Mowry Avenue at a point approximately three miles upstream from the slough's confluence with San Francisco Bay. Before discharge to Mowry Slough, the effluent is commingled with wastewater from either of the Farwell or Bellflower aquifer reclamation wells at a dilution ratio of at least 20 to 1. The discharge from these wells is saline intrusion water being pumped out and returned to the Bay. The wells are operated by the discharger and are under a separate permit to discharge.
3. The Board, in April 1975, adopted a Water Quality Control Plan for San Francisco Bay Basin. This Plan contains water quality objectives for Mowry Slough and San Francisco Bay.
4. The beneficial uses of San Francisco Bay are:
 - a. Recreation
 - b. Fish migration and habitat
 - c. Habitat and resting for waterfowl and migratory birds
 - d. Industrial water supply
 - e. Esthetic enjoyment
 - f. Navigation

5. Effluent limitation, and toxic effluent standards, established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
6. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
7. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
8. This Board is not required to comply with the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) as this is an NPDES permit and is exempt from such provisions per section 13389 of the Water Code.
9. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator, U. S. Environmental Protection Agency, has no objections.

IT IS HEREBY ORDERED that Alameda County Water District, Bernardo Softening Plant, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

| <u>Constituent</u> | <u>Units</u> | <u>30-Day Average</u> | <u>Maximum Daily</u> |
|--------------------|--------------|---------------------------|--------------------------|
| Suspended Solids | lbs/day | 25 | 38 |
| | (kg/day) | (11) | (17) |
| | mg/l | 30 | 45 |

2. The discharge shall not have a pH less than 6.5 nor greater than 8.5.
3. In any representative set of samples the waste as discharged shall meet the following limit of quality:

TOXICITY: The survival of test fishes in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

4. The daily discharge rate is obtained from the following calculation for any calendar day:

$$\text{Daily discharge rate (lbs/day)} = \frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$

$$\text{Daily discharge rate (kg/day)} = \frac{3.78}{N} \sum_{i=1}^N Q_i C_i$$

in which N is the number of samples analyzed in any calendar day. Q_i and C_i are the flow rate (MGD) and the constituent concentration (mg/l) respectively, which are associated with each of the N grab samples which may be taken in any calendar day. If a composite sample is taken, C_i is the concentration measured in the composite sample and Q_i is the average flow rate occurring during the period over which samples are composited.

5. The 30-day average discharge rate or concentration shall be the arithmetic average of all the daily values calculated using the results of analyses of all samples collected during any 30 consecutive calendar day period. If fewer than four samples are collected and analyzed during any 30 consecutive calendar day period, compliance with the 30-day average limitation shall not be determined.
6. Instantaneous maximum limitations shall be applied to the values of the measurements obtained for any single grab sample.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the state at any place.
- a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

- a. Dissolved oxygen 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum.
 - c. pH Variation from natural ambient pH by more than 0.2 pH units.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

- 1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.
- 2. Compliance with Section A of this Order may be demonstrated after dilution of the waste in other waste discharges prior to discharge to receiving water. During periods of wet weather when water originating from the aquifer reclamation wells is not available for dilution, compliance with Section A of this Order may be demonstrated after dilution of the wastes in other of the discharger's aquifer reclamation well wastewater or by using storm flow in the Flood Control District's channel or by adding raw well water to the waste holding basin at the plant site before discharge. The discharger shall notify the Board in advance of any proposed change in dilution water from that described in Finding 2 of this Order.
- 3. This Order includes items 1 and 5 of the attached "Reporting Requirements", dated August 8, 1973.
- 4. This Order includes items 1, 4, 5, 6, 7, 8, 10, and 11 of the attached "Standard Provisions", dated August 8, 1973.
- 5. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to this Board.

6. This Order is a renewal of the waste discharge requirements contained in Order 74-73 which expires July 15, 1979, and all sections of this Order shall become effective on that date.
7. This Order expires on July 15, 1984, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 15, 1979.

FRED H. DIERKER
Executive Officer

Attachments:

Reporting Requirements, dated 8/8/73
Standard Provisions, dated 8/8/73
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Alameda County Water District

Bernardo Water Softening Plant

Fremont, Alameda County

NPDES NO. CA 0006751

ORDER NO. 79-54

CONSISTS OF

PART A (dated 1/78)

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

| <u>Station</u> | <u>Description</u> |
|----------------|---|
| *E-1 | At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. This point of sampling may include other waste discharges used for the purpose of diluting the softening plant's discharge. |

*A sketch shall accompany each self-monitoring report showing the location of effluent sampling station E-1 and indicating the source of dilution water used.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

- A. The schedule of sampling, measurements and analysis shall be that given as Table I.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 79-54.
2. Contains the following modification of Part A, paragraph F.3:

"Written reports shall be filed regularly for each calendar quarter (unless specified otherwise) by the fifteenth day of the month following the end of each calendar quarter ..."
3. Does not include the following paragraphs of Part A:

C.3, C.4, C.5, D.1, D.3, D.4, E.2.b, E.2.c, E.4, and F.3.c.
4. Is effective on the date shown below.
5. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachment:
Table I

Effective date June 6, 1979

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

NPDES NO. CA0006751

ORDER NO. 79-54

| SAMPLING STATIONS | E-1 | | | | | | | | |
|---|-----|--|--|--|--|--|--|--|--|
| TYPE OF SAMPLES | C | | | | | | | | |
| Flow Rate (mgd) | D | | | | | | | | |
| Bioassay (% survival) | M | | | | | | | | |
| Total Suspended Matter (mg/l & kg/day) | W | | | | | | | | |
| pH (units) | W | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

LEGEND

C = Composite sample
D = Daily
M = Once each month
W = Once each week